



US008961947B2

(12) **United States Patent**
Rehor et al.

(10) **Patent No.:** **US 8,961,947 B2**
(45) **Date of Patent:** **Feb. 24, 2015**

(54) **POLYMERIC TISSUE SEALANT**
(75) Inventors: **Annemie Rehor**, Winterthur (CH);
Simona Cerritelli, Zurich (CH)

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(73) Assignee: **Kuros Biosurgery AG** (CH)

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(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 1568 days.

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(21) Appl. No.: **12/102,157**

(22) Filed: **Apr. 14, 2008**

(65) **Prior Publication Data**

US 2008/0253987 A1 Oct. 16, 2008

Related U.S. Application Data

(60) Provisional application No. 60/911,737, filed on Apr. 13, 2007.

(51) **Int. Cl.**

A61K 31/74 (2006.01)**A61L 31/06** (2006.01)**A61L 24/04** (2006.01)**C08G 65/332** (2006.01)**C08G 65/333** (2006.01)

(Continued)

(52) **U.S. Cl.**

CPC **A61L 31/06** (2013.01); **A61L 24/046**
(2013.01); **C08G 65/3322** (2013.01); **C08G**
65/33306 (2013.01); **C08G 65/3342** (2013.01);
C08G 2650/58 (2013.01); **C08L 71/02**
(2013.01)

USPC **424/78.17**

(58) **Field of Classification Search**

None

See application file for complete search history.

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Primary Examiner — Paul Dickinson(74) *Attorney, Agent, or Firm* — Pabst Patent Group LLP

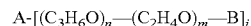
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ABSTRACT

Methods for making biomaterials for use as a tissue sealant, kits containing precursors for forming the biomaterials, and the resulting biomaterials are described herein. The biomaterials are formed from a composition comprising at least a first and a second precursor molecule, wherein:

i) the first precursor molecule is a poly(ethylene glycol) based polymer having x nucleophilic groups selected from the group consisting of thiol or amino groups, wherein x is greater than or equal to 2

ii) the second precursor molecule is of the general formula:



wherein m and n are integers from 1 to 200

i is greater than 2

A is a branch point

B is a conjugated unsaturated group

The precursors are selected based on the desired properties of the biomaterial. Optionally, the biomaterials contain additives, such as thixotropic agents, radiopaque agents, or bio-active agents. In the preferred embodiment, the biomaterials are used to reduce, inhibit, or contain loss of a biological fluid or gas in a patient.

66 Claims, 4 Drawing Sheets